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September 10, 1990

TO: File

FROM: Holland Shepherd, Reclamation Specialist *HWS*

RE: Site Inspection, Barrick Mercur, M/045/017, Tooele County, Utah

Date of Inspection: September 5, 1990. Time: 10:00 - 3:00.

Attendees: Holland Shepherd, Tony Gallegos, Wayne Hedberg, Division of Oil, Gas and Mining; Loren Morten, C. C. Patel, Bureau of Water Pollution Control; Dave Beatty, Ralph Sacrison, Barrick Mercur; Terry Vandall, Dames and Moore; Brian Buck, J.B.R. Consultants.

This site inspection was conducted to observe and discuss the ongoing dump leach #3 construction and to evaluate a recent cyanide solution spill which occurred the previous week at the mine site. A meeting held during our visit involved a discussion of capping dump leach #3 and the development of an operational contingency plan for dump leach #3.

The operator has almost completed installation of the first HDPE 60 mil liner in dump leach area #3. Construction of the secondary 12 inch clay layer is underway. The second 60 mil HDPE liner will be emplaced over the clay. The clay material originates from the Marrian Hill and Brickyard pits. Four feet of old mill tailings will eventually be applied above the clay and 60 mil liners as a "cushion" for the ore to be leached.

The operator has dumped topsoil material down the road embankment along the new road connecting dump leach #3 with the tailings pond. According to Ralph Sacrison, this was intentional so that it can be readily pulled back up at final reclamation. I've asked Dave Beatty to incorporate this provision into the mine plan for future reference.

According to Dave Beatty, trees and shrubs are scrapped off and buried, not salvaged, before the topsoil is stockpiled. This amounts to a large waste of planting material because of the topsoil lost with the shrub and tree roots as well as the organic material from the woody plants.

Page 2
Barrick Mercur
M/045/017
September 10, 1990

During the meeting, we discussed the necessity of incorporating the requirements of the Community Right-to-Know Act into the operators contingency plan for dump leach #3. A number of emergency agencies must be notified in the event of a spill of over 10 lbs. sodium cyanide.

We also discussed whether it would be necessary to install a clay cap over dump leach #3. Apparently, the operator will be applying 3 feet of subsoil and 1 foot of topsoil over the dump/waste material at final reclamation. This depth will act as a moisture barrier, preventing water contact with the leached and rinsed ore. This may render the installation of a clay cap pointless. The BWPC will evaluate information provided by the operator and JBR, to decide whether the clay will be appropriate (see attached discussion by JBR).

On August 29, 1990, Barrick spilled an estimated 140,000 gallons of tailings solution. The spill contained 40-60 lbs of sodium cyanide. Apparently, a flange in the 10 inch PVC piping, containing the tailings solution broke. From our evaluation of the leak area, Barrick had not adequately prepared for a leak of such magnitude. Several downstream sediment containment structures were not able to contain the leak. These structures also were not lined, thereby allowing for potential ground water contamination from any of the solution(s) which might have seeped into the ground.

The operator added a mixture of calcium hypochlorite and copper sulfate in an attempt to neutralize the sodium cyanide. This changes the cyanide to copper cyanate.

The spilled solution which was not contained, eventually percolated into the ground or evaporated as it worked its way down Mercur Canyon.

jb
Attachment
MNM045017.2